Office of Home Visiting

Utah's MIECHV Continuous Quality Improvement and Data Collection Plan

UTAH DEPARTMENT OF HEALTH
Office of Home Visiting

CQI Plan Purpose

This plan is intended to help home visiting programs use a data-driven methodology to increase effectiveness resulting in better family outcomes.

This plan describes a number of current procedures that are already in operation and other planned steps scheduled for implementation during the current grant year. As the plan is implemented it is expected that the feasibility of the proposed model will be evaluated and modified in true quality improvement fashion.

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This publication was made possible by Grant No. 6 XO2MC19417-01-01 from the U.S. Department of Health and Human Services, Health Resources and Services Administration. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the U.S. Department of Health and Human Services, Health Resources and Services Administration.

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Background Information

Utah has been preparing to improve its efforts in child maltreatment prevention for several years. In 2005 the Division of Child and Family Services (DCFS) Board created the Child Abuse Prevention Advisory Committee (CAPAC) to review evidence-based prevention programs and to make recommendations to DCFS about which prevention programs should be implemented in Utah. CAPAC strongly recommended the implementation of evidence-based home visiting programs such as Nurse Family Partnership (NFP) and Healthy Families America (HFA).

In 2007 Utah sent a team composed of representatives from DCFS, Utah Department of Health (UDOH), Primary Children's Hospital, Prevent Child Abuse Utah, Family Support Centers, and Utah State University to the Prevent Institute at the University of North Carolina where the evidence-based prevention strategies were presented. The Utah team then developed a plan to seek funding to implement the NFP and HFA home visiting programs.

A representative of the NFP national office in Denver visited Utah in 2007 at the request of DCFS and UDOH to meet with staff from the Utah County and Salt Lake Valley Health Departments which were interested in starting local NFP programs. Subsequently, Salt Lake Valley Health Department obtained county funding and began their NFP program in May of 2008.

In 2007 DCFS allocated some of its federal prevention funding to start several HFA programs in Utah. Nine local communities submitted applications that were approved. Three were funded, based on available funds. Local HFA programs were funded at Family Support Centers in Davis and Cache counties and at Prevent Child Abuse Utah in Weber County.

In 2008 additional support for home visiting came from the Governor's Early Childhood Commission (ECC) which prioritized home visiting as one of its top issues for which to pursue funding. Voices for Utah Children along with the Governor's ECC identified home visiting to prevent child maltreatment as the top priority in its Policy Matters Project. Finally, the Governor's Child and Family Cabinet Council has identified home visiting to prevent child maltreatment as one of its six priorities to focus on for the coming state fiscal year.

As a result of the above mentioned efforts and initiative, The Department of Health's Office of Home Visiting (OHV) was established in 2008 through funding from the federal Department of Health and Human Services, Administration for Children and Families, *Supporting Evidence-based Home Visiting to Prevent Child Maltreatment* (EBHV). The purpose of this grant was to promote a coordinated service continuum of evidence-based home visiting that supports the positive health, safety, and development of young children and their families. At this time Utah had only four evidence-based home visiting programs. As an EBHV grantee, the OHV supported these programs through professional development training, technical assistance, financial support, development of a state home visiting data system, and a home visiting evaluation to monitor the quality of services, outcomes, and adherence to program fidelity. In addition, the OHV created the OHV Advisory Council and worked closely with many state and community partners to build knowledge of and support for home visiting.

Currently the OHV is supported by Maternal Infant Early Childhood Home Visiting (MIECHV) funding through the Affordable Care Act. OHV contracts for services in four counties and supports three evidence based models: Nurse Family Partnership, Parents as Teachers and Healthy Families America.

Early Childhood Utah

In September 2011, Governor Herbert designated the existing Early Childhood Comprehensive Systems State Team, located in the Utah Department of Health, Bureau of Child Development, to also function as the State Advisory Council on Early Care and Education. The purpose of this combined state team, hereafter referred to as Early Childhood Utah, is to work to ensure that all Utah children enter school healthy and ready to learn by:

- working with public and private partners to foster the development of cross-sector service systems;
- identifying opportunities for, and barriers to, collaboration and coordination among early childhood programs and services;
- assessing and developing recommendations for improving quantity, quality, and participation in early childhood programs and services;
- assessing and developing recommendations for improving the capacity and effectiveness of professional development training and education for early childhood service providers;
- assessing and making recommendations for improved early childhood data collection and usage; and
- engaging in mutually agreed upon cross-sector work projects designed to accomplish these purposes.

The Office of Home Visiting is a permanent voting member of Early Childhood Utah. Early Childhood Utah is comprised of the following four standing committees:

- ***Access to Health Care and Medical Homes:*** The focus of this committee is ensuring access to health and dental health care services and support for medical homes for all young children in the state.
- ***Early Care and Education:*** The focus of this committee is ensuring access to quality programs and services that support the early learning and development of all young children in the state. This includes both in-home and out-of-home services.
- ***Social-Emotional Development and Mental Health Services:*** The focus of this committee is ensuring access to services to promote healthy social-emotional development in all young children in the state, and services to address the needs of children who have or are at risk for developing mental health concerns or challenging behaviors.
- ***Parenting Education and Family Support:*** The focus of this committee is ensuring access to family-centered, culturally appropriate parenting education and family support services for all parents of young children in the state, to promote the ability of parents and families to nurture and support the healthy development of their children.

OHV is under the umbrella of Early Childhood Utah

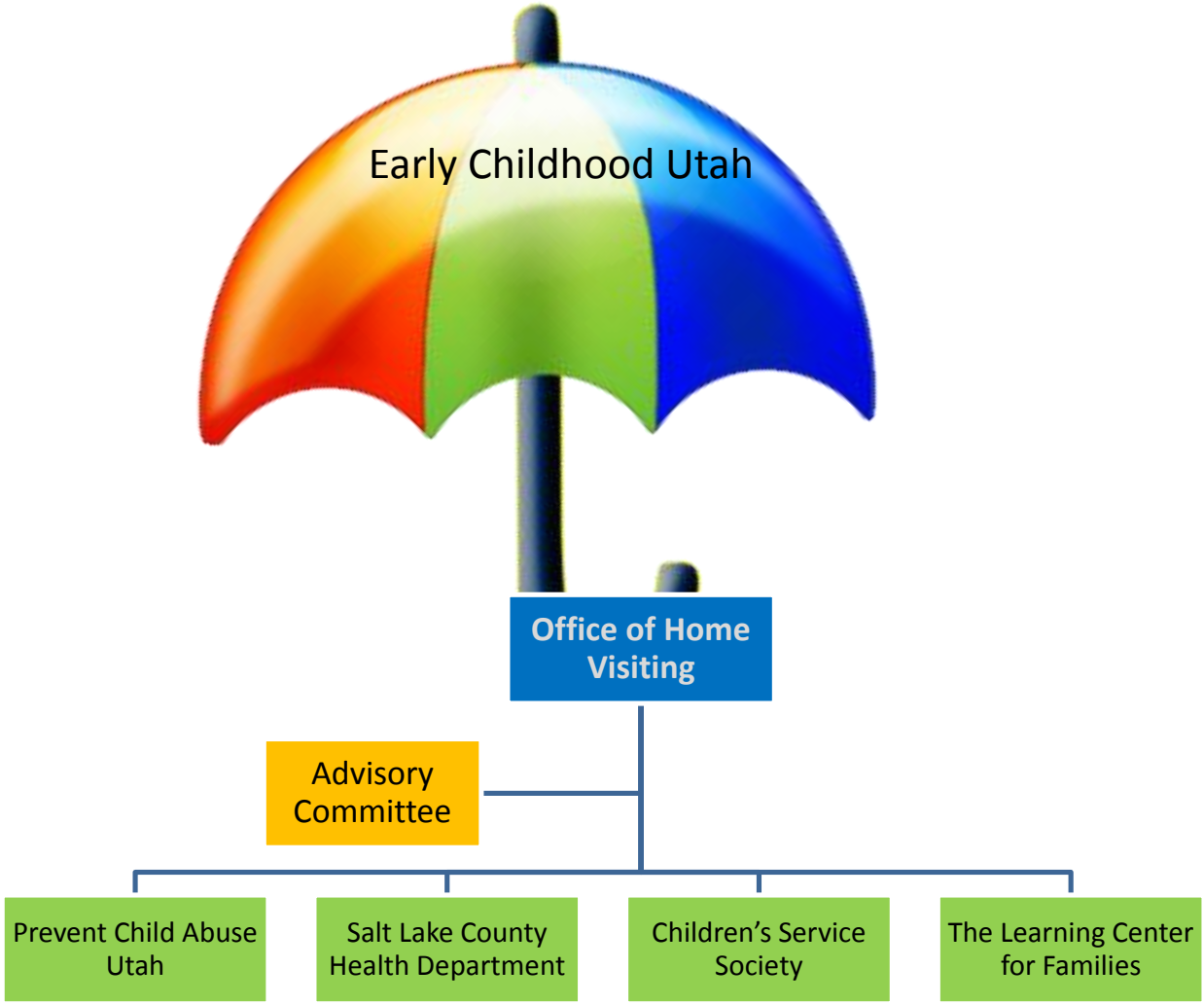


Figure 1. Organizational chart.

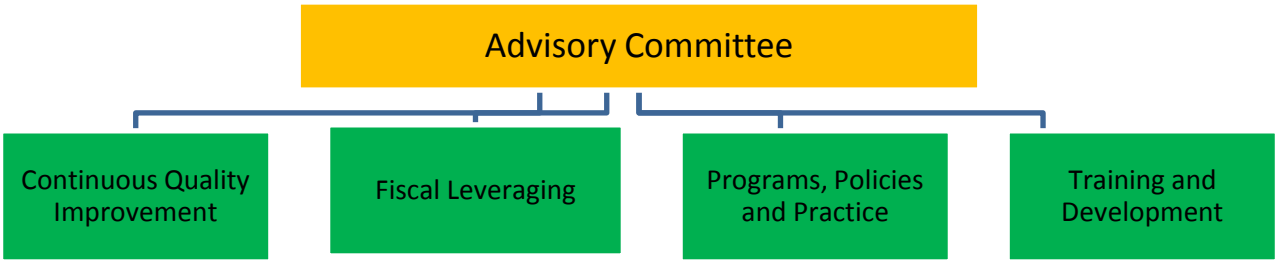


Figure 2. Advisory committee workgroups.

Advisory Committee

The Advisory Committee serves as an oversight body for the Office of Home Visiting. The Advisory Council Membership consists of the following:

Name	Organization	Committee
Laurie Baksh	Maternal and Infant Health	Professional Development
Teresa Brechlin	Violence and Injury Prevention	Fiscal Leveraging
Blanche Brunk	Nurse Family Partnership	CQI, Professional Development, Programs, Policies and Practices
Kerry Carver	Parents as Teachers	Programs, Policies and Practices, CQI
Emma Chacon	Medicaid EPSDT Program	Fiscal Leveraging
Carolyn Christensen	Department of Work Force Services	Professional Development
Janis Dubno	Voices for Utah Children	Fiscal Leveraging
Christine Espinel	Office of Health Disparities	Professional Development
Cori Groth, Ph.D.	Utah Education Policy Center	CQI, Professional Development, Programs, Policies and Practices
Mark Innocenti, Ph.D.	Utah State University	CQI
Antoniette Lasky	Primary Children's Medical Center	Professional Development, Fiscal Leveraging, CQI
Suzanne Leonelli	Office of Home Visiting	CQI, Fiscal Leveraging, Programs, Policies and Practices, Professional Development
Barbara Levitt	United Way Help Me Grow	Programs, Policies and Practices Professional Development
Colleen Murphy	Parent Support Programs	Programs, Policies and Practices Professional Development
Julie Olson	Medicaid	Fiscal Leveraging
Susan Ord	Baby Watch / Early Intervention	Programs, Policies and Practices
Craig Povey	Division of Substance Abuse	Fiscal Leveraging
Harper Randall	Bureau of Children with Special Health Care Needs	Fiscal Leveraging, Professional Development
Katie Riccord	Head Start State Collaboration	Fiscal Leveraging Programs, Policies and Practices
Nan Streeter	Family and Health Preparedness	Fiscal Leveraging, Programs, Policies, and Practices
Heidi Valdez	CAPTA	Professional Development Fiscal Leveraging
Leah Voorhies	Utah State Office of Education	Programs, Policies and Practices
Angela Ward	Office of Home Visiting	CQI, Fiscal Leveraging, Programs, Policies and Practices, Professional Development
Teresa Whiting	Bureau of Child Development	CQI, Fiscal Leveraging, Programs, Policies and Practices

Revised as of 04/24/2014

Introduction

An Opportunity for Building System Quality

The MIECHV initiative provides an unprecedented opportunity for collaboration and partnership at the federal, state, and community levels to improve health and development outcomes for children through evidence-based home visiting. The program is one of several strategies embedded in a comprehensive early childhood system that promotes maternal, infant, and early childhood health and development, relying on the best available research evidence to inform and guide practice. An integral part of this is the application of a strategic and continuous method of assessing processes and program quality.

A Need for CQI

To achieve this purpose it is essential to implement a procedure that systematically reviews performance measures and outcomes, and creates plans for improvement within programs and the broader system. This will help determine whether services and activities meet program expectations of quality and progress as well as other outcomes.

This Continuous Quality Improvement (CQI) process will involve all staff and a number of community stakeholders in the evaluation of the effectiveness of home visiting services, the support system, and MIECHV as a whole. To achieve maximum impact, staff and stakeholders will practice a system of self-directed improvement.

What is CQI?

Continuous Quality Improvement is the process of identifying, describing, and analyzing strengths and problems and then testing, implementing, learning from, and revising solutions. It relies on an organizational culture that is proactive and supports continuous learning. CQI must be firmly grounded in the overall mission, vision, and values of the agency/system. Most importantly, it is dependent upon the active inclusion and participation of staff at all levels of the agency/system, occasionally including stakeholders beyond the agency/system (National Child Welfare Resource Center for Organizational Improvement and Casey Family Programs, 2005).

CQI Guiding Principles

Fundamental to the development of Utah's CQI process is remembering that the system is designed to improve the lives of young children and their families, thereby strengthening communities. We have a commitment to providing credible and transparent processes that are aimed at achieving the best possible outcomes. Guided by this core commitment, the CQI process also includes the following fundamental principles:

1. CQI is seen as in investment.
2. CQI team members are adequately trained in CQI modalities and home visiting best practice.
3. CQI and data inform policy and procedure development.
4. CQI supports various team perspectives and views with a collaborative spirit.
5. CQI encourages creative yet efficient and effective solutions to problems.
6. CQI focuses on learning and process improvement rather than blaming people or programs.

Figure 3 illustrates the guiding principles of CQI.

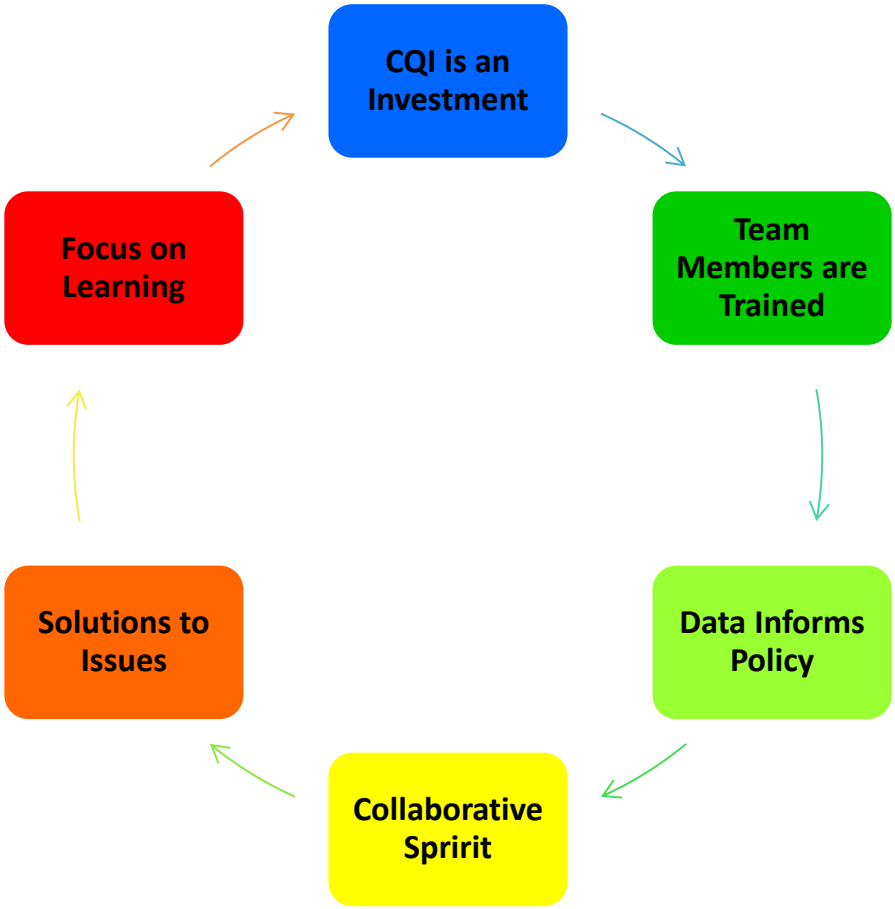


Figure 3. Guiding principles.

Plan Overview

Information about the planning and Implementation stages of the Utah's CQI Plan can be found in Appendix A.

State CQI Team Members

OHV staff, subcommittee of the OHV Advisory Committee, model developers, and a designate from each site. At this point members are: Suzanne Leonelli and Angela Ward OHV staff; Dr. Mark Innocenti and Rod Hopkins, Evaluators; Dr. Anoinette Lasky, Advisory Committee and Blanche Brunk, model developer representative. A representative from each site will be added once full implementation occurs. Other members from the Advisory Committee will be added as needed.

State Team Responsibilities

- Identify state's goals
- Create a PDSA (Plan-Do-Study-Act) plan
- Review OHV goals and processes for possible CQI state project
- Review site and state level data quarterly at State CQI Team meetings
- Integrate CQI into quarterly professional development meetings
- Provide training on CQI processes to sites
- Mentor sites in the CQI process
- Report to Advisory Committee
- Add additional training and monitoring as needed by the emphasized state goal

State Team Lead's Responsibilities

- Facilitate quarterly State CQI Team meetings
- Coordinate mentoring activities
- Provide a quarterly report for the Advisory Committee
- Provide Advisory Committee feedback to Local CQI Teams
- Communicate with Local CQI Teams
- Record minutes and distribute to Advisory Board and home visiting sites within two weeks of the meeting

Local CQI Team Members

All HV staff which typically includes home visitors, supervisors, program directors and data compliance staff.

Local CQI Team Responsibilities

- Facilitates monthly Local CQI Team
- Review monthly data reports
- Learn to generate own monthly reports
- Participate in CQI discussions and activities
- Create a PDSA plan based on the report data
- Integrate CQI discussions and planning into monthly staff meetings

Local CQI Team Leader's Responsibilities

- Participate on the State CQI Team
- Brings Local CQI Team concerns to State CQI meeting
- Gives feedback from State CQI meeting to Local CQI Team
- Send "CQI Data Discussion Form" and "PDSA Form" to OHV monthly
- Create Quarterly Local CQI report for State CQI Team

OHV Staff's Role

- Teach sites to generate monthly data reports
- Review monthly data reports
- Mentor sites on how to interpret data
- Provide mentoring on PDSA plans
- Discuss the Local CQI Team's activities at least monthly at OHV staff meeting
- Give feedback on benchmark data to sites
- Direct enhancements to the MIS system
- Review "CQI Data Discussion Form" and "PDSA Form" monthly

Advisory Committee

- Reviews data and reports quarterly
- Gives feedback to State CQI team quarterly.

Timeline

Monthly

- OHV/Sites generate reports
- Sites review reports
- OHV reviews reports
- OHV staff member assigned to site meets with local CQI team- Sites work on a local PDSA plan based on the reports (with help from assigned State CQI Team member)
- Sites submit CQI Data Discussion Form" and "PDSA Form" to OHV

Quarterly

- State CQI Lead compiles sites quarterly reports for the State CQI Team
- State CQI Team meets to review local data and plans
- State CQI Team prepares a report for Advisory Committee
- State CQI Team prepares feedback for local sites about their data and CQI actions
- Advisory Committee reviews state CQI team report and provides feedback
- Include CQI updates at quarterly MIECHV professional development meetings

Team	Monthly	Quarterly
State CQI Team		Meeting
		Review Local Team's Report
State Team Lead	Mentor Sites	Report for Advisory Committee
		Feedback to Local Team
Local CQI Team	Meeting	Attend Professional Development
	Review Data	
Local CQI Leader	Send Forms to OHV	Attend State CQI meeting
		Prepare Quarterly Report
OHV	Staff meeting	
	Review Monthly Data Report	
	Give Feedback to Sites	
Advisory Committee		Meeting
		Review State CQI Report
		Give Feedback to State CQI Team

Infrastructure for Driving Improvement

Involvement of Key Stakeholders

CQI is a hands-on endeavor by people who care about their work, strive to improve themselves, and increase their productivity. The Office of Home Visiting (OHV) recognizes the necessity of creating a culture of quality within the State of Utah and each of the home visiting program sites must involve stake holders in the implementation process from the highest level of management, to the home visitors and potentially to other staff in the agency. Generating a vision of quality and having information that identifies quality outcomes is crucial in establishing this philosophy. It is OHV's position that CQI is a shared responsibility and success depends on everyone's input and participation. CQI leverages the expertise and perspective of project participants across roles, levels and sites. To work well, CQI needs to be a safe process for constructive input from all participants. CQI is based on solid relationships among staff, just like good home visiting is based on a solid relationship between practitioner and child; this is parallel process.

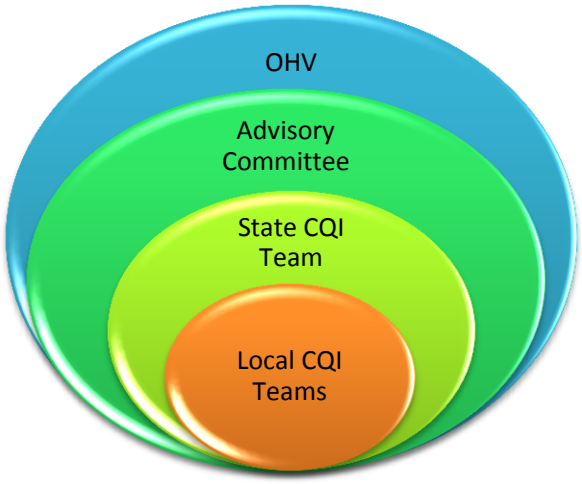
Leadership and Accountability Structure

A mechanism for change and supporting data are needed to ensure that the system remains responsive to families, service providers and program staff. Utah's CQI plan is a circular process with several overlapping elements of accountability.

a. The OHV staff, which includes the evaluation team, provides general oversight for the CQI process throughout the state. The OHV staff is responsible for analyzing and comparing data, providing TA not provided by the State CQI Team or contractor, and focusing on improvement activities at all levels. Additionally, the OHV staff facilitates communication with the OHV Advisory Board and the Regional Project Officer.

b. The Advisory Committee is an oversight body that brings together stakeholders that hold the OHV accountable for home visiting activities in Utah.

c. The State CQI Team is responsible for providing vision and leadership to Utah's CQI process. This body can assess the strengths and weaknesses of the local programs and provide technical assistance to improve services based on the data. The State Team is also tasked with reporting to the OHV Advisory Board.



This figure illustrates the supportive system within Utah. All groups are wrapping their arms around the local sites to provide support, acknowledging the direct impact they have with improving families.

Figure 4. CQI team structure.

d. Local home visiting programs hold continuous quality improvement activities at the center of their practice to ensure fidelity to national models, monitor data quality, accuracy and completeness and continually look for possible improvements to increase the quality of the services they provide.

Team Membership

State CQI Team. The State CQI team anchors the CQI process and ensures that efforts are taken from start to finish. Members of the State CQI team consist of a subcommittee of the OHV Advisory Committee, all OHV staff and each Local CQI Team Leader. Representatives from each home visiting model (Healthy Families America, Parents as Teachers and Nurse Family Partnership) are invited to participate on this team.

Local CQI Teams. Each implementing site creates a Local CQI Team comprised of all MIECHV funded home visiting staff. A team leader is selected at each home visiting program site. The Local CQI Team Leader can be anyone from the MIECHV funded home visiting staff.

CQI Team Responsibility

State CQI Team. The responsibilities of the State CQI Team are to provide leadership and vision to the state CQI process. Members from the Advisory committee and Model Developers contribute their professional expertise in planning, discussing and generating CQI goals and activities. That expertise can be applied to training opportunities for any or all CQI participants. Local CQI Team Leaders bring information about their individual program's CQI activities. All members of the State CQI Team participate in discussions and making decisions using the "CQI Values" (described later in this document) as a framework. Discussions are driven by the "State CQI Team Agenda" that is included in the Appendix B. Items include: determining what story the data tells; necessary state level action; state goal review; addressing system barriers and what is working well.

Based on the data reports and discussion the State CQI team creates a state goal (which can change over time based on data, similar to program goals) and supports sites in reaching this goal. The state goal is based on aggregate state data. Some sites may be proficient in the area of the state goal while others may need substantial support. All members of the State CQI Team participate in the CQI process of identifying strengths and areas to improve. A Plan Do Study Act (PDSA) plan is created using the PDSA form found in the Appendix B. The State CQI Team activities support program PDSA implementation through professional development, training, resources and systems change.

The State Team Lead generates monthly reports for the sites until the local sites are fully trained in creating them independently. The reports are sent to the MIECHV/OHV staff and to the State CQI Team for review. Each Local CQI Team Leader discusses their sites CQI goals and activities at least monthly in staff meeting with the entire Local CQI team. This provides an opportunity to address statewide issues and consolidate information and issues from all implementing sites.

The State CQI Team will appoint a Team Lead to oversee data reports generation, coordinate meetings and interface with the Local CQI Team Leader. Each implementing site will have a State CQI Team member assigned as a mentor. Most likely the mentor will be an OHV staff member.

State CQI Team Lead. The State CQI Team Lead is responsible for: compiling the site's quarterly report into one report for the Advisory Committee; presenting the data to the Advisory Committee; scheduling the State CQI team meeting; facilitating the meeting or designating someone to do it; coordinating mentoring of the implementing sites; communicating with Local CQI Teams and supporting the CQI guiding principles. The State CQI Team Lead may at any time delegate some of these responsibilities to other State CQI Team members but the State Lead has the ultimate responsibility for task completion.

Mentoring Local CQI Teams. To assure that CQI activities become embedded in the implementing sites processes a member of the State CQI Team will be assigned to mentor each Local CQI Team. The State CQI team member will provide initial leadership and mentoring until the site can implement the CQI process independently. Monthly meetings with the CQI Team to evaluate data and facilitate discussion around local CQI activities will be held. It is the goal that these meetings will be incorporated into regularly scheduled staff meeting. The State CQI team member will remain available for mentoring even after the Local CQI Team is functioning independently.

The State CQI Team mentors will coordinate CQI-related training and technical assistance activities, including but not limited to:

- assisting with the development and management of CQI training work plans;
- initially convening and documenting regular meetings and calls;
- organizing and disseminating CQI (Continuous Quality Improvement) training materials and resources;
- support the home visiting teams with the development, preparation, production, and adaptation of training materials;
- provide ongoing mentoring to home visiting sites;
- document training activities and help to produce reports, notes, and minutes reflecting these activities and their impact;
- monitor family outcomes;
- liaise with other CQI teams within UDOH and other agencies.

Local CQI Team. Each site-level team drives improvement at their individual site. The process is initiated by monthly data reports created from the previous month's benchmark and outcome data. These are standard reports produced by the OHV data base. The reports are required to be generated by the 10th of the month. Initially the Site Team Leader will receive monthly data reports from the State CQI Team Lead and be responsible for sharing with the Local CQI team. Once the Local CQI Team Leader is fully trained in the creation of reports the Local CQI Team

Leader will be responsible for generating the monthly reports. Sites can identify other sources of data or information that will lead to desired outcomes.

All members of the Local CQI Team participate in evaluating data and discussing possible CQI activities during their monthly CQI meetings. It is the intent that CQI discussions become embedded into monthly staff meetings. "CQI Values" will serve as a standard for group dialog. The values appear on all the discussion agenda as a reminder to the participants. The discussion will be driven by the "CQI Data Discussion Form" available in the Appendix B. Items of discussion include: data report review; determining what the data indicates; possible steps for improvement; system barriers and supports process or policy changes; what is working well and lessons learned. From this discussion CQI goals and activities will be generated employing the "plan-do-study-act" model (PDSA) using the PDSA Worksheet for Testing Change developed by the Institute for Healthcare Improvement and will be referred to as the PDSA form throughout this document (see the Appendix B).

Local CQI Teams will generate an update about the PDSA, progress on the previous quarter's activities and their newly planned CQI activities using the "Quarterly CQI Progress Report" and send it to the State CQI Team and the OHV. Monthly a copy of the "CQI Data Discussion Form" and the "PDSA Form" will be sent to the OHV for review.

If a site determines they have a need above what they can solve at a local level, it will be put on the agenda of the State CQI Team for discussion. The Local CQI Team Leader can make a request to the State CQI Team Lead to add an item to the agenda or discuss needs for structural or statewide change.

Local CQI Team Lead

The Local CQI Team Lead is selected by each individual program and can be the supervisor or another staff. The Local CQI Team Lead serves to coordinate activities but not direct or dominate the process. The Local CQI Team Lead is responsible for: creating monthly data reports; presenting the data to the team for discussion; facilitating team discussion; facilitating planning a PDSA; sending a monthly report about CQI activities to OHV and the State CQI Team. Forms to use for discussion and reports are located in the Appendix B. This keeps discussion on task and uniform across programs. The Local CQI Team Lead is tasked with maintaining the "CQI Values" throughout the discussion and supporting the building of a culture of quality within the team.

OHV Staff

OHV staff serves in a dual role; serving as the part of the State CQI Team and is the responsible organization to oversee the MIECHV grant. OHV will participate with the State CQI Team and continue to monitor the MIECHV implementing home visiting programs and be responsible the federal reporting according to the grant requirements. OHV staff will review the monthly submission of the "CQI Data Discussion Forms" and the "PDSA Forms". Reviews will take place at least monthly during established OHV staff meetings. Reactions to the monthly

submissions will be disseminated to sites using the "OHV Feedback to Sites" form found in the Appendix B. Figure 5 illustrates the data flow process.

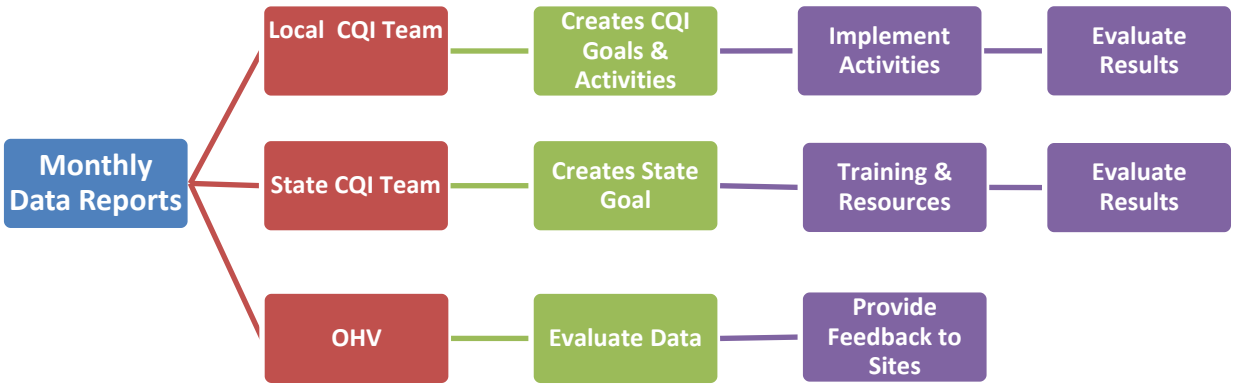


Figure 5. Data flow process.

Building a Culture of Quality Training in CQI Values

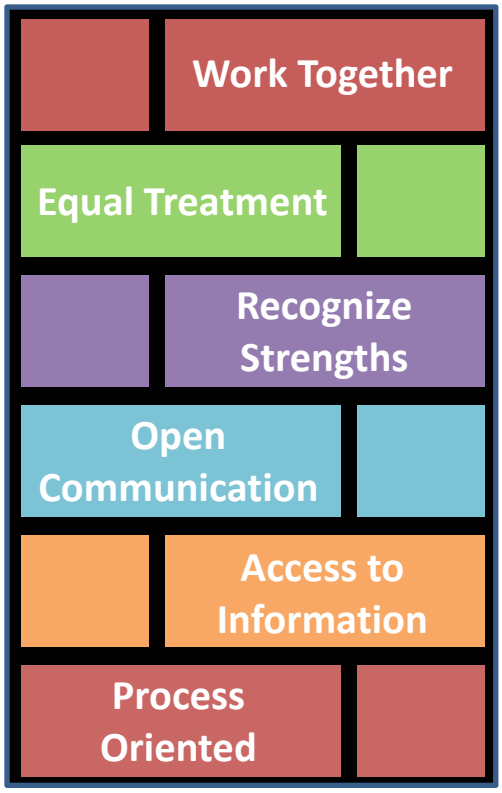
The OHV employs an attitude and set of values (see Figure 6) to improve the levels of quality in all aspects of service. The CQI Values are:

- We are all in this together
- Everyone should be treated equally
- Recognize strengths
- Open, honest communication is vital
- Everyone has access to all the information
- Focus on processes
- There are no successes or failures, just learning experiences.

Understanding our joint involvement in CQI is a process by which all staff are involved in the evaluation of the effectiveness of services provided to participants in the Utah's MIECHV Program. It is vital to the implementation success for the CQI process for all staff to use their knowledge, vision and skills.

Everyone being treated equally relates to the concept that all members of each team will have insight and input on ways to develop a quality program. All members of each team have the same goal and work in concert to create harmony and create a quality home visiting system.

Recognizing strengths in our program, our staff, and our families is necessary before we can begin any change process. We must build on strengths in order to improve areas where change is needed.



Adhering to the values builds a strong foundation of quality

Figure 6. CQI values.

Open, honest communication is vital. Two important aspects of communication are empathy and listening. Discussing how changes should be made can be a very delicate and sensitive subject. In this context empathy is having a sense and appreciation of the problems, abilities and behaviors of all the involved individuals. Communication should begin from a strengths-based perspective. The focus needs to remain on what is currently working well before looking at what needs to be changed or added. It incorporates a nonjudgmental approach to the behavior of others, especially when based on limited perspective. In a culture of working together, empathy is a sensible and realistic attitude for dealing with others. This kind of empathy does not happen without valuing honest and open communication, which fosters the ability to see the world from the other's view.

Along with empathy comes listening. In the CQI context this means listening to staff about all aspects of the home visiting process, suspending judgment on people and looking for solutions in process. When unclear on why people behave in certain ways, attempt to ask more questions to gain a better understanding of the behavior in question. When you start from the perspective of working together, where you identify with each other and with the program, listening makes more sense. An important way to encourage open communication is by creating a culture where people listen and ask questions to one another to improve understanding. This is a culture where open, honest communication is understood as necessary for people to function best.

CQI is an analytical decision making tool that illustrates when a process is working predictably and when it is not. Variation is present in any process, deciding when the variation is natural and when it needs correction is the key to quality control. The focus is on process rather than on the individual, recognizing both internal and external "customers," and promotes the need for objective data to analyze and improve processes.

Not meeting goals provides an opportunity to evaluate the past and make changes to improve the future. CQI provides a chance to learn and develop by identifying training needs and possible changes in policy and procedure.

Training and Resources

Date	Topic	Audience	Content
3/7/2012	"What is CQI?"	Executive Directors and Supervisors of Home Visiting Sites	Overview of what CQI is. History of CQI. How to use the PDSA tool.
5/10/2012	"Basics of CQI"	All home visiting staff	Basic components of the CQI process. Using data to make decisions. How to use the PDSA tool.
8/30/2012	Follow up activities	All home visiting staff	OHV staff followed up with each site to discuss their original action plan.
4/17/2013	"State Benchmark Data"	All home visiting staff	OHV presented state data from the first 6 months of MIECHV implementation.
5/2/2013-5/3/2013	"Influencer"	Executive Directors and Supervisors of Home Visiting Sites	2 Day leadership course to diagnose the cause to any organizational problem and find vital behaviors that bring the greatest amount of change.
6/3/2013	"Using the HOME"	All home visiting staff	Incorporating the HOME into a regular visit and using the data to plan subsequent visits.
8/7/2013	"Using data to determine goals" and "ASQ refresher"	All home visiting staff	OHV will present local site data. Sites will use data to drive decisions on change. Home visitors will learn to incorporate the ASQ-3 and ASQ-SE into a home visit and use the data to plan future home visits.

Recognizing that a culture of quality starts at the top of an organization, an initial CQI training was held for the executive directors and supervisors of the implementing sites. (3/7/2012; see training table above) Dr. Mark Innocenti provided information on the history of CQI; the basic process; using CQI in the home visiting programs and the "plan-do-study-act" model. Dr. Innocenti Introduced the "PDSA Worksheet for Testing Change" developed by Institute for Health Care Improvement. Utah will be using this form as a model for creating goals in the PDSA cycle.

A subsequent training was held by Dr. Innocenti (5/10/2012) for all home visiting staff to teach the basic components of the CQI process; how to use data to make decisions; and how to use the PDSA tool. A focus of this training was to introduce the values of building a culture of quality. Dr. Innocenti emphasized that all members of the team have access to the data and are encouraged to take an active role in the process. The focus is on the process and what can be changed to make the process more effective. The OHV team continually reminds the home visiting staff that we are all working together to improve the lives of the families we serve.

Sites were then given data about their individual program to analyze and determine a course of action. Each site set a goal based on their data. An OHV staff member was assigned to each

program to follow up with this initial goal. (Angela-Prevent Child Abuse Utah (PCAU) and The Learning Center for Families (TLC), Rod-Children's Service Society (CSS) and Nurse Family Partnership (NFP). Each site was encouraged to assign a member of their staff to be the CQI Team Leader. The sites had 6 weeks to work on a site level action plan and then the assigned staff member followed up to determine progress on the goal and discuss next steps. Based on the sites first experience with CQI they were encouraged to make the process a regular practice.

In April 2013, during the quarterly OHV professional development training for all MIECHV contractors OHV staff presented data gathered during the first 6 months of MIECHV implementation. Data in each benchmark area was presented. Available data for each construct was limited due to small numbers of families enrolled and some data collection time points had not occurred. It was discovered that many of the process measures could be improved. A state goal of increasing the on schedule completion of the ASQ-3 (Ages and Stages Questionnaire), ASQ-SE (Ages and Stages Social Emotional), HOME (Home Observation Measurement of the Environment) and EPDS (Edinburgh Postnatal Depression Screen) was adopted. It was determined that staff needed refresher training on using the instruments and using the data to plan subsequent home visits. Two training opportunities were planned: refresher courses on incorporating the HOME, ASQ-3 and ASQ-SE in a home visit and using the data to plan future visits.

Quality improvement requires changes in attitude, perspective and actions. To address these requirements in May 2013, a 2-Day leadership training titled "Influencer Training" was held for all executive directors and supervisors. OHV determined that this course addressed the fundamental underpinnings of the work of quality improvement. "Influencer Training" provides proven strategies for leaders to uproot entrenched habits and execute change initiatives in teams and entire organizations. The intent of this training is that a foundation of quality will be established. It is expected that management team members will be involved in the quality improvement process at the site level and that center directors will be involved in the quality improvement process at the organizational level.

"Influencer" discussed creating sustainable change in organizations and individuals. "Influencer" draws on the base practices of many of the world's leading change agents and on five decades of social-science research to create a powerful model for changing behavior. "Influencer Training" creates a powerful and portable model for changing behaviors. The course also taught how to obtain desired outcomes that are specific, measurable and time bound through identifying a small number of high leverage behaviors that bring about the greatest amount of positive change. Making changes to achieve quality improvement involves various solutions to address multiple causes. Using data to assess the basis for a change and keeping the right data available are key components of the training.

Training on using data to drive decisions is scheduled for 8/7/2013 for all home visiting staff. Sites will have the opportunity to review their individual data and use the information to make decisions on what area of quality improvement to tackle first. Use of the PDSA form will be reviewed. Sites will be assigned a State CQI Team mentor and fully begin the CQI process.

OHV formally began the roll out the CQI plan 05/21/2013 at the OHV Advisory Council meeting. The CQI sub-group will reconvene with additional members and meet in August. Sites will begin full implementation during their August staff meetings.

An existing mechanism that will be leveraged to inform ongoing development of the CQI training component is MIECHV quarterly professional development meeting. MIECHV staff hosts quarterly professional development training that covers a variety of topics and the sites of OHV deems applicable. Once the State CQI plan is adopted a portion of the training will be dedicated to CQI training. Training topics may include but not be limited to: analyzing data, creating CQI plans, evaluating results of activities, process change, PDSA worksheet and process maps. Home visiting programs are invited to share strengths and weaknesses, as well as lessons learned with other programs.

Ongoing System for Using Data to Drive Decisions

OHV has adopted the Plan-Do-Study-Act (PDSA) approach to CQI. It is a cyclical approach to reviewing processes and continually improving. Figure 7 illustrates this process. This method can be applied repeatedly to the same process to drive continuous improvement.

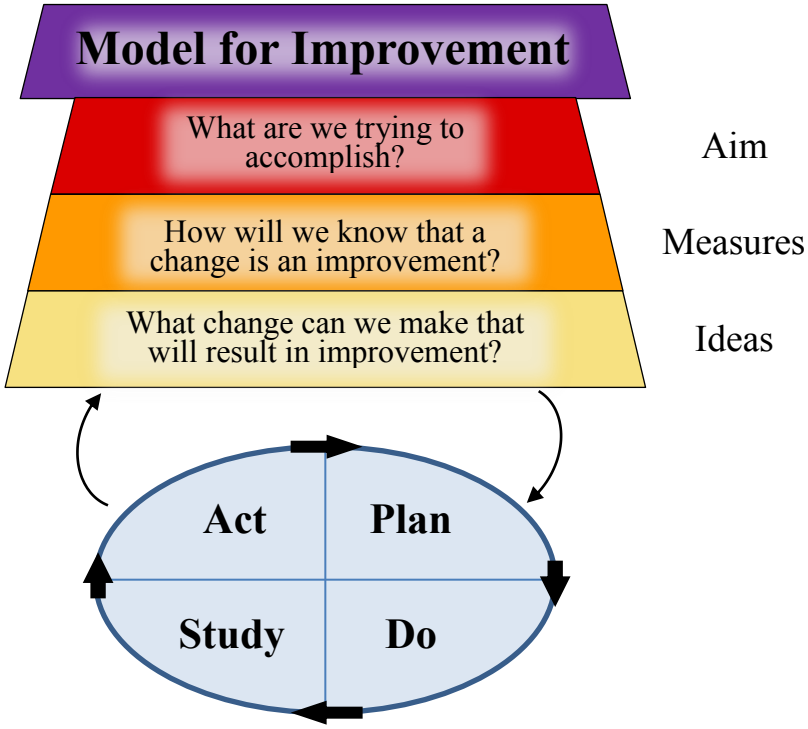


Figure 7. PDSA Cycle

Plan. Define the sequence of events of each process. Seeing the process on paper is a powerful way to see what is going on and the problems often immediately surface. Identify the improvement opportunity in the process. Brainstorm for possible causes and determine what is the root cause or biggest contributor. Brainstorm potential workable solutions. Outline the action plan and targets for improvement.

Do. Execute the action plan. Check progress against the action plan. Strong action plans list owners, tasks, target dates and measurements of success or milestones. As the action plan is being executed, compare progress to what was initially set. Milestones may be added or changed if the execution reveals new information or circumstances. Update the plan and monitor accordingly.

Study. Following the implementation of the action plan determine if the activities were successful. Establish how the process is measured. Compare the data from the process before the change to the data from the changed process. Evaluate if the improvement hit the targeted level. Determine if the new process revealed new information or created an unintended impact.

Act. Evaluate whether the initial improvement enabled the process to perform at the required level or if more action is needed. If more than one step was identified in the plan process it may be necessary to add it to the action plan at this point. Determine if a new action plan is warranted. If the action created the desired affects then standardize the improvements as the new process. Celebrate success.

Begin the cycle again based on new data. The established pattern will be repeated monthly.

Leveraging of Current Resources

Data Systems. Two data systems will be used for gathering data to inform the CQI process: The OHV database and Efforts to Outcomes (ETO) database utilized by the Nurse Family Partnership (NFP) program.

Three home visiting programs use the OHV database to input data gathered on families. Each site has access to its own data and has the capacity to create reports and exports. OHV staff has access to all sites data and can also create reports and exports for analyzing state wide data.
The NFP program uses the ETO data base. OHV staff has access to information and reports in the ETO database. NFP is also developing supplementary reports. If additional data is needed a data run is requested from the NFP national office. Utah has a contract with NFP to obtain this data.

At the local level, contractors, OHV, and national model developers are responsible for maintaining fidelity to the national home visiting model in their community. Each national model has an existing system to monitor fidelity. CQI processes can build on systems already working for the models. The local NFP program has engaged in the CQI process as part of their model's requirements. This will continue and incorporate the elements of the State CQI plan.

Expertise. Two experienced evaluators work with OHV. These evaluators have skills in a number of areas relevant to evaluation and intervention.

Rodney W. Hopkins is a Research Assistant Professor in the Social Research Institute at the University of Utah. He has been involved in program evaluation for nearly 20 years. His areas of interest include substance abuse prevention, community coalitions, and evidence-based practice. He has been the evaluator for the Utah State Office of Education's Safe and Drug-Free

Schools programs for the past 9 years. Rod has taught a variety of academic courses including Substance Use and Abuse, Community Organizing for Health, and Program Evaluation. He holds both a B.S. and M.S. degrees from Brigham Young University and has completed all of his Ph.D. coursework from the University of Utah. He will provide his experience to the State CQI Team in a data analyst role. He will be tasked with creating and analyzing trend data on at least an annual basis.

Mark Innocenti, Ph.D. is the Director of the Research and Evaluation Division at the Center for Persons with Disabilities, a University Center for Excellence in Developmental Disabilities. He holds an appointment as an Associate Professor in Psychology at Utah State University (USU). Dr. Innocenti has over 30 years of experience working with infants and young children at-risk and with disabilities and their families through multiple research and model demonstration projects. He is external evaluator for the Utah Office of Home Visiting. Dr. Innocenti has served as the evaluator on a number of projects including the Utah Evidence-Based Home Visiting Project, the Granite School District Early Reading First Project, and the National Early Childhood Transition Center. Dr. Innocenti was a developer of the Parents Interaction with Children: Checklist of Observations Linked to Outcomes (PICCOLO) and the Home Visiting Rating Scale (HOVRS), measures for use in home visiting programs and has published a book on an approach to working with parents, *Developmental Parenting*. He has been providing national and international workshops and trainings on this model and the measures. He was on the Board of Directors for the Council for Exceptional Children (CEC) and was President for the Division for Early Childhood (DEC) of CEC. Mark will provide his expertise in program evaluation to the State CQI Team. His experience will prove invaluable to improving home visiting programs and family outcomes.

MIS System

System History

In early 2010, the OHV contracted with a database company to design and build a state home visiting database to collect, track and report process, outcome, and fidelity data. The data base was originally designed to accommodate Utah's HFA programs. Reports that align with model fidelity monitoring and accreditation were built into the system.

Since that time structural changes have been made in the database to accommodate the Parents as Teachers program and the MIECHV benchmarks. Recently an ad-hoc reports feature has been added to the system. This reporting feature will allow users to create flexible reports on every piece of data that is entered into the database. This increased capability will allow home visiting sites to directly monitor progress.

The data base is constantly being upgraded as needs are identified. The enhanced state data system will allow efficient reporting functions in order to monitor program performance, conduct cross-site comparisons across various domains, and improve CQI processes. Upgrades include moving towards a workflow management system.

Through benchmark reporting, the OHV will be able to determine where to focus technical assistance and training to meet improvement standards required by the legislation. Locally, the data system will make it easier for programs to manage staff caseload and performance, compare themselves to other like agencies and improve program and participant outcomes and performance.

Technical Features

The OHV data base is a web-based system housed on the Utah Health Department server. The OHV database captures demographic, financial, insurance, health, education, risks, and other information about families, parents, children, and home visitors, as well as information about individual home visits. The system also captures the information from assessment and evaluation forms such as ASQ-3, ASQ-SE, EPDS, HOME, and more. Printable reports, including an extensive ad hoc reporting facility, provide both detailed and summary statistics of system data. Other features include support for multiple home-visiting models, data export, limited independent assessor access, role-specific user management features, and temporal data support. Advanced security features for user authentication and access methods are in compliance with UDOH official standards. The OHV data base is implemented in C#/ASP.NET using Microsoft .NET Framework 4.0, connecting to a PostgreSQL database.

Accessibility

The decision to be a web-based system was made so users can access the database from anywhere there is an internet connection. Children's Service Society and the Learning Center for

Families are now using tablets to collect data in real time in the family's home. Each site is responsible to follow the security policy of Utah Health Department.

Home visiting staff at each site has access to the data base. Access to information is based on the staff's individual role. Supervisors and Program Managers have access to all data for the families at their site. They can run all the reports available on the entire site or the individual staff data. (They do not have access to other site's data.) Home Visitors are only granted access to the families assigned to them. Once the family is assigned to a home visitor then that home visitor can access that particular family's information.

One staff at the office of Home Visiting is assigned to be a super user and has access to all data at all the sites. Currently that is Angela Ward. The super user can access all data in the database. The OHV program coordinator and external evaluator can see information but the names are hidden. Multimedia Data Services Corporation (MDSC) employees assigned to the data base development have access to all information. Information about families involved in the evaluation is available to the internal evaluator, Rod Hopkins.

Data Security

OHV. Utah Department of Health maintains a policy on data and computer security. All OHV staff are required to know and follow the policy. OHV staff are HIPAA trained, computers are encrypted and kept in badge secured buildings, strong password must be changed every 90 days, old passwords may not be reused. Next year's contracts with implementing sites will require that all home visiting staff be HIPAA trained and follow Department of Health computer security policy. The OHV data base is web based so no identifying information is stored on the device. Home visiting programs that use tablets for data collection are required to subscribe to an internet provider and not use public
Wi-Fi.

OHV Data system. OHV data system software is securely accessed through a HTTPS connection designed to prevent "eavesdropping" and tampering, providing a secure communication channel. Multiple security measures are inherent in the OHV data base: required strong passcodes, passcodes must be changed every 90 days; old passcodes may not be reused; 30 minute time out. The super user does not have access to passcodes. If a user forgets their passcode the super user can reset it for a one time log in and the user must immediately change the passcode.

The OHV data base is housed on a state government servers located at the State Capitol building. Nightly back up of the system is conducted by Department of Technology Services (DTS), a division of the State of Utah. Information is stored for 30 days and then moved to long term storage. In the event of a data loss no more than one day of data would be lost. Home visiting sites maintain paper files that could be used to recreate the data. MDSC maintains multiple copies of the OHV database software; in the event of any damage software could be immediately restored. DTS maintains firewalls, internet filters, network monitoring, and virus protection software for the entire computer system. The Department of Health Security Officer does reviews and audits of DTS's practices for additional assurance.

ETO-NFP. All NFP staff have completed both standard HIPAA and HIPAA high tech training. Salt Lake County requires strong passwords and recommends 8 characters, upper and lower case, special characters, and numbers. Employees must use a passcode lock to protect the iPad or iPhone data in the event it is lost or stolen. In addition Salt Lake County has firewalls, internet filters, network monitoring, and virus protection software in compliance with HIPAA requirements. All data containing personal information is required to be encrypted. Network Shared Folders designated as restricted can only be accessed with administrator approval and justification.

ETO software meets several government data management and security protocols and incorporates security features within the platform to ensure privacy and confidentiality is maintained. ETO software is securely accessed through a HTTPS connection designed to prevent "eavesdropping" and tampering, providing a secure communication channel to the ETO application. In addition, ETO software's SQL data storage is secured by Microsoft Windows file-level encryption (EFS). Utilizing SunGard hosting facilities, data is backed up disk-to-disk eliminating the risk of tape transfers. All data transmissions between hosting facilities are encrypted at all times for security and confidentiality and the all data access is password protected.

Training and Support

Training and support for OHV database users is provided by OHV staff. Home visiting staff are trained at their individual site as each phase of the database is implemented. Training occurs with new staff when they are hired. A "Database Manual" was created as reference guide for all users. The Database Manual provides detailed instructions on entering data at each step of the process. It also provides definitions of terms. Additional ongoing support is provided by OHV staff (Angela). All home visiting staff are encouraged to call or email Angela Ward directly and immediately so any data entry issues can be resolved quickly. Technical issues are handled by MDSC's project coordinator. MDSC is responsive and issues are handled immediately.

Ongoing Maintenance and Upgrades

OHV has a weekly call with MDSC to discuss ongoing needs and updates. Changes are grouped into phases based on priority. As phases are completed a new version is installed. Local MIECHV contractors have the ability to provide feedback and input on changes and upgrades directly to the super user. In the past site suggestions have been an invaluable tool for system upgrade.

As the development of the system has unfolded it has become evident that changes and upgrades will be a continuous process. A yearly work plan is developed in conjunction with the data base developers. This plan contains the anticipated needs and changes. Unanticipated changes are enveloped into the plan as they are identified.

Ongoing Data System Enhancements

- Ad hoc reports that give case and site specific data

- Improved report functionality allows the sites to generate their own reports
- Alerts for the home visitor for time sensitive activities
- Creation of a data "dashboard" that can incorporate both process and outcome measures

Salt Lake Valley Health Department Uses the NFP National Database

Efforts to Outcomes (ETO) is a web-based data tracking system accessible to all nurses, managers, and data entry specialists who are part of the NFP program. Wherever there is secure Internet access it is available 24 hours per day. On the Salt Lake Valley Health Department (SLVHD) team, the office specialist and nursing supervisor are the primary users of ETO. The former enters the data from the nurse's home visits and assessments and the later to pull reports to monitor outcomes for program participants. Maintenance is performed at the national NFP office. Nurses collect the data, submit it to the office specialist who then enters it into ETO. It is the supervisor's responsibility to ensure quality and completeness. He does this by performing regular chart audits and pulling and evaluating reports within ETO system and then, comparing them to hard copies. Ongoing support and supervision for this task is provided by the national NFP office.

Data Collection

Source of Data Elements

Local home visitors are the primary collectors of data entered into either the OHV data base or the ETO. Data collected include all quantitative data necessary for federal benchmark reporting and additional information needed for CQI purposes. Frequency of data collection is prescribed by Utah's approved benchmark plan. A data collection schedule is in the Appendix B. (See Tool Administration Chart)

HFA and PAT. Supervisors or other designated staff collect information on referrals and assign the family to a home visitor. Home visitors are responsible for collecting all the data on each family they serve. Initially a paper intake form was developed for the HFA and PAT programs that captured all necessary benchmark information. Some programs have moved to entering data directly into the OHV data base through the use of tablets during the home visit. Other source information is the individual instruments: Home Observation for Measurement of the Environment (HOME), Edinburgh Postnatal Depression Scale (EPDS), Ages and Stages Questionnaire (ASQ-3), Ages and Stages Questionnaire-Social Emotional (ASQ-SE), and Protective Factors Survey (PFS). These instruments are embedded into the OHV data base and can be scored during the home visit.

NFP. Nurses fill out a home visit encounter form for each visit. NFP nurses collect data on the appropriate forms for each visit and give them to the office specialist who then enters the information into the NFP national database, ETO. There are a few data elements required by the Benchmarks that are not collected by the NFP forms so an additional form was developed by OHV staff for the nurses to use. Once collected the office specialist enters the information into an excel spreadsheet. The NFP national office is making changes in data collection forms and this may impact the use of this extra form in the future. Other source information is the individual instruments: HOME, EPDS, ASQ-3, ASQ-SE and Patient Health Questionnaire-9 (PHQ-9). These instruments are completed at prescribed intervals according to the NFP model and entered into the ETO by the office specialist.

Data Quality

Program supervisors or directors monitor data entry and comply with prescribed data requirements and schedules as outlined in the "Data Collection and Instrument Tool Kit" The "Data Collection and Instrument Tool Kit" is a reference manual containing information about data collection procedures; MIECHV definitions; Benchmarks and Constructs; Benchmark collection detail; posing data collection questions; tool administration chart; screening instruments; and Intake Form. All home visiting programs were trained on the tool kit as part of the benchmark training done in January and February of 2012. A review of benchmark data collection was held at each site during November 2012. Follow up training is scheduled with each site as deemed necessary. Chart audits and reflective supervision with a focus on data quality and completeness is conducted according to the supervision frequency recommended by each program's national model.

Additional data quality monitoring is provided by the OHV staff. This monitoring process is a three-tiered approach: (a) missing data, (b) data quality including benchmark schedules, and (c) site monitoring. Contractually sites are required to enter the data within five business days of the home visits. Initially reports were sent quarterly/as needed to inform sites of missing data. Sites are given a time period to get the data entered and a follow up report was sent. These reports are generated on the OHV database and the ETO database (see Figure 8).

Figure 8. *Data reports cycle.*

The current procedure is to generate reports and provide them to the sites by the 10th of the month regarding data for the previous month. These are the standard reports discussed earlier in this plan. The sites have until the 20th of the month to respond to the reports. This allows for missing data to be entered in a suitable amount of time. As each site increases their skills in generating and interpreting reports these will be generated by the individual site and sent to the OHV.

OHV will provide feedback about the reports using the "Data Feedback Report Form" found in the Appendix B. Data feedback includes the second tier of oversight: data quality and benchmark scheduled data. Data that seems to be incorrect will be flagged so sites may verify or correct the information. Technical assistance will be provided to all the sites to facilitate the sites generating their own data reports on a monthly basis.

To address the third tier of monitoring OHV conducts annual site visits that include randomized chart auditing to ensure data in the data system matches data in the family file. A report of the file audit is sent to the supervisor. Frequently these audits have identified areas of retraining needed. OHV creates a training opportunity to address the discovered deficit.

In addition to monthly ETO reports NFP has additional process checks. The nurse turns in paperwork and stamps the date on the form. Once the information is entered into the ETO the Office Specialist stamps it again, noting the date the information is entered. Missing data is flagged by the office specialist and given back to the nurse to complete. The forms are then placed in the client's permanent file. Nurses have the option of creating duplicate forms to ensure data accuracy.

Training and Support

OHV staff is responsible for providing training to home visiting staff on benchmark requirements, data collection obligations and making data driven decisions. Home visiting staff was provided training at each phase of benchmark implementation. Training on the use of the ASQ-3, ASQ-SE and the HOME have been facilitated by the OHV for all home visiting staff.

HFA and PAT

An "OHV Database Manual" was developed for the HFA and PAT sites as a reference and instruction manual on how to use the OHV database with the addition of the new benchmarks now embedded into the system. The HFA and PAT sites were initially trained on this manual in August of 2012. A review was held with each site in conjunction with a benchmark review in November 2012. We anticipate that as the database evolves additional ongoing training will be necessary as well as updating the OHV Database Manual. As it becomes necessary new home visitors will be trained by OHV staff using the "Data Collection Tool Kit" and "OHV Database Manual".

Reports

HFA and PAT

Current capacity for reports has improved dramatically with the implementation of the "ad-hoc" report feature. Plans to refine and improve the filtering system to better accurately reflect if data is entered within the prescribed benchmark time frames are currently underway. Summer 2013 is the expected deadline for this addition. Custom reports can be created by each program. Every element of data can be selected as a list, filter or group.

Benchmark information drives the types of reports that will be created. The OHV has created standard reports on the data base that are available to each sites. There is a standard report for each of the benchmark constructs. The standard reports will serve as the basis of CQI reports. Each month all of these standard reports will be generated and reviewed by the sites and OHV. Sites will use them for CQI activities. OHV will use them for monitoring purposes as mentioned previously.

Additional reports that measure some elements of model fidelity are also available: number and percentage of home visits completed; caseload; referrals and children and families served.

NFP

Monthly reports are generated out of the ETO that measure a limited number of benchmark data and home visitor productivity. The local NFP program is testing if it will be feasible to enter all benchmark data on MIECHV families in the OHV database. If this proves feasible all benchmark data can be generated by one system.

Model Fidelity

Home visiting model fidelity is monitored and maintained by local contractor, the national model developers and the OHV staff. The OHV data base has some capacity to create reports that monitor model fidelity: number and percentage of home visits completed; caseload; referrals and children and families served.

Alignment and Integration with Benchmarks

The Utah benchmark plan is the framework for the reports and the CQI activities. Efforts are focused on improving the benchmark indicators and the associated outcomes. The value of each indicator will provide a snapshot of the construct. Trends in benchmark indicators will permit monitoring of progress towards achieving the benchmarks and show whether we are on track to meet the improvement measures.

Data collected in the OHV data base system helps to inform CQI activities. Meeting and exceeding targets of the benchmark plan is a constant and continual process which may be

included in the CQI plan but is not the ultimate goal. The quarterly focus may include a particular benchmark in need of attention or it may include data collected for benchmark reporting which can also inform other relationships among the data.

Utah is currently adding an alerts feature to the data base that will prompt the home visitors at each data collection milestone. This will ensure that data is collected on time and the required screening tools are used according to schedule. In addition it ensures that required data for the Discretionary Grant Information System for Home Visiting (DGIS-HV) is captured.

Trend Data

A specific way the OHV will support local site CQI activities is by providing monthly and quarterly data summaries. Monthly data that can be summarized and provided to each implementing site will include: referrals, caseload, home visits, and minutes per visit. Monthly data will be aggregated on a quarterly basis and compared across sites. The OHV has chosen to present this information as trend data in graph or data table format.

Historically, public health's role has been to monitor the trends in rates of disease and death and trends in medical, social, and behavioral risk factors that may contribute to these adverse events. Trends in observed rates provide invaluable information for needs assessment, program planning, program evaluation, policy development, and continuous quality improvement. Examining data over time also permits making predictions about future frequencies and rates of occurrence.

Typically in public health, trend data are presented for rates arising from large populations over relatively long periods of time (e.g. ten or more years). For example, the national vital records system is a source for trend analysis of infant mortality and other death rates. The national rates described in these analyses are very reliable and are available over many years insuring a precise characterization of changes over time.

Why Trend Analysis?

One aspect of epidemiology is understanding that health outcomes in a population can only be fully understood if their frequency is examined over time. Trend analysis is helpful to public health and may focus on one or more of the following:

The overall pattern of change in an indicator over time. Generally, the goal of trend analysis is to discern whether the level of health status, service, or indicator has increased or decreased over time, and if it has, how quickly or slowly the increase or decrease has occurred. In home visiting, for instance, examining individual caseloads over time would be a measure of home visiting implementation.

Comparing one time period to another time period. This form of trend analysis is carried out in order to assess the level of an indicator before and after an event. Evaluating the impact of programs and measuring specific data elements on a quarterly basis may provide insights about

program accomplishments and resource expenditures which would be useful to annual program planning.

Comparing one geographic area to another. When comparing the level of an indicator across geographic areas, only looking at one point in time can be misleading. For instance, one area may have a higher value on an indicator in one year, but a lower value in the next--analyzing the trend over several years can give a more precise comparison of the two areas. This approach has direct application to Utah's MIECHV work as the OHV can segment data between implementing sites and across models for comparative purposes.

Comparing one population to another. When comparing the level of an indicator across populations, both absolute and relative differences are important. For instance, one population may have consistently higher rates over time compared to another population and the rates in both populations may be decreasing over time, but the disparity between the rates in the two populations at each point in time may be increasing or decreasing. Analyzing the trend over time can provide information about the changing rates and the changing disparity in the rates.

Making future projections. Projecting rates into the future is a means of monitoring progress toward a benchmark or local objective or simply providing an estimate of the rate of future occurrence. Projecting the potential number of future cases can aid in the planning of needed services and in defining corresponding resource requirements.

Summary

The OHV will use trend data/graphs since they provide a dynamic rather than a fixed view of the home visiting program data, including data from children, mothers, and their partners. For trend data to be most useful for CQI purposes it must relate directly to locally identified areas of focus. The responsibility of the OHV staff, therefore, is to present trend graphs and data tables with supporting narrative that make these connections. In particular, the ability to appropriately analyze and interpret trends for individual implementation sites is essential to support program change and self-improvement.

Building & Sustaining CQI Infrastructure

Utah's plan integrates training on developing a culture of quality with the tools necessary to perform the CQI activities. The intent is that each implementing site catches the vision of improving their home visiting program and gains the knowledge and practice to continue the process independently (see Figure 9 for building the infrastructure).

One goal of sustaining CQI at the site level is that sites will establish policy and practice around CQI activities agency wide. Training Executive Directors in the culture of quality and CQI supports this goal.

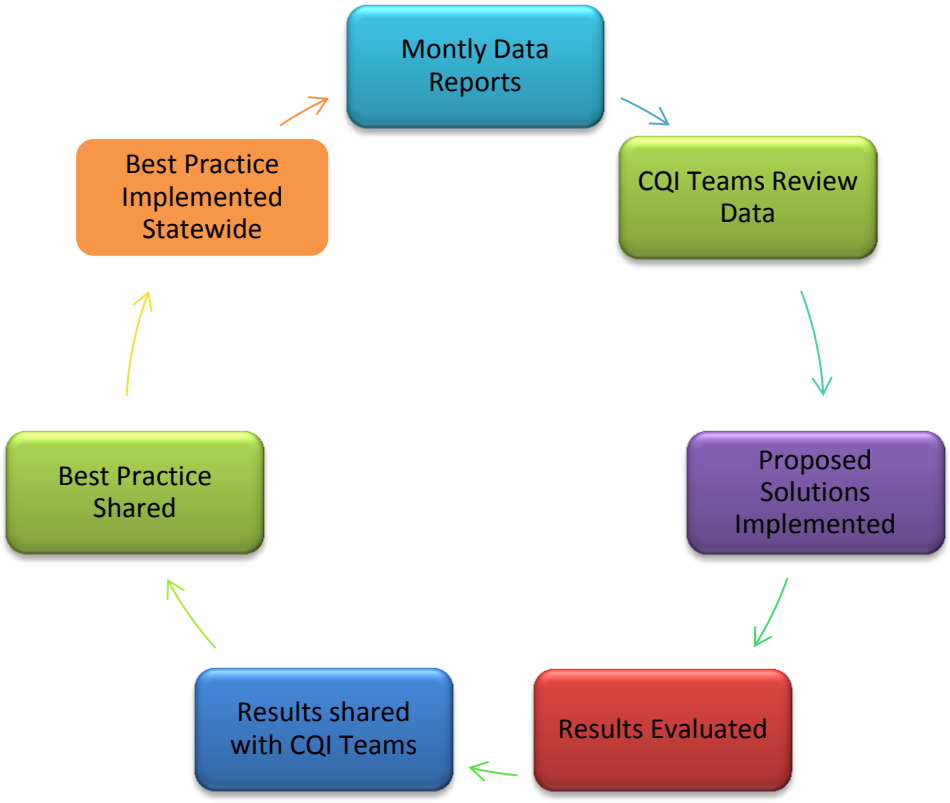


Figure 9. Building CQI infrastructure.

Appendices

Appendix A
Planning and Implementation Phases Charts

CQI TIMELINE

Planning Phase

Goals and Objectives	Completion Dates													
1) Create a state Continuous Quality Improvement Plan	Jan 2012	Feb 12	Mar 12	Apr 12	Jun 12	Oct 12	Jan 2013	Feb 13	Mar 13	Apr 13	May 13	Jun 13	Jul 13	Aug 13
A. Create a CQI planning team														
B. Create an initial CQI plan of action														
C. Write a formal CQI plan														
D. Meet with MCH to leverage resources														
E. Implementation begins at OHV Advisory Council											5/12			
F. CQI plan is presented to Home Visiting Programs											5/30			
G. Home Visiting Programs begin CQI at staff meeting.														
2) Train Home visiting Programs in CQI	Jan 12	Feb 12	Mar 12	Apr 12	Jun 12	Oct 12	Jan 13	Feb 13	Mar 13	Apr13	May 13	Jun13	Jul 13	Aug 13
A. Train program executive directors on CQI														
B. Train all home visiting staff on CQI processes														
C. Follow-up with each sites initial goal														
D. Train sites how to use and interpret data														
E. Train sites to use Ad Hoc reports on OHV Database														
F. Influencer Training for Directors and Supervisors														
G. Using data to Enhance a Home Visit														8/7

Completed
On target or in process (ongoing activities)
Planned dates

Implementation Phase

Goals and Objectives	Planned Completion Dates										
Implement Approved CQI Plan	Aug 2013	Sept 2013	Oct 2013	Nov 2013	Dec 2013	Jan 2014	Feb 2014	Mar 2014	April 2014	May 2014	June 2014
A. Receive Plan Approval											
B. Introduce CQI Plan to HV sites	8/7										
C. Assign a mentor to each site											
D. Mentors attend site's staff meetings											
E. Generate Data Reports OHV Staff Meeting											
F. Local CQI Team Meeting											
G. Sites Submit *Forms to OHV											
H. OHV Staff Meeting/Review Data Reports											
I. OHV gives data feedback to sites											
J. Sites Submit Quarterly Report											
K. State CQI Meetings											
L. State Lead compiles report for Advisory Committee											
M. Advisory Committee Meetings											
N. Advisory Committee Feedback											
O. Quarterly Professional Development											
P. OHV Evaluates CQI Plan											

*CQI Data Discussion Form and PDSA Form

Appendix B
Data Discussion and Reporting Forms

CQI Data Discussion Agenda

Site name: Date:

Data will be reviewed as part of Utah's MIECHV CQI Plan by each site at monthly team meetings. Send a copy to OHV by the 5th of the following month.

The OHV employs an attitude and set of values to improve the levels of quality in all aspects of service. The CQI Values are:

- We are all in this together
- Everyone should be treated equally
- Recognize Strengths
- Open, honest communication is vital
- Everyone has access to all the information on processes
- Focus on processes
- There are no success or failures, just learning experiences.

1. Outstanding issues form last month:

2. Data Review:

3. What does the data indicate?

4. Ideas to improve data or outcome:

5. What systems and practices are working well?

6. Are there practices and policies not being followed?

7. What systems or practices need to be changed?

8. Support needed from State CQI Team or OHV:

9. Create a PDSA plan

PDSA Worksheet for Testing Change

Aim: (overall goal you wish to achieve)

Every goal will require multiple smaller tests of change

Describe your first (or next) test of change:	Person responsible	When to be done	Where to be done

Plan

List the tasks needed to set up this test of change	Person responsible	When to be done	Where to be done

Predict what will happen when the test is carried out	Measures to determine if prediction succeeds

Do

Describe what actually happened when you ran the test

Study

Describe the measured results and how they compared to the predictions

Act

Describe what modifications to the plan will be made for the next cycle from what you learned

Institute for Healthcare Improvement

MIECHV Quarterly CQI Progress Report

Site name: Date:

Progress report to summarize continuous quality improvement efforts undertaken by MIECHV funded evidence based home visiting programs over the following reporting period. Reports are due the 15th of the month l following the end of the quarter. Circle the report period:

October- December January-March

April- June July-September

1. What systems and practices are working well?

2. What areas for improvement did the data identify?

3. What is your CQI goal?

4. Report on the PDSA cycle:

5. What barriers or system issues have been encountered implementing CQI activities?

6. Identify action plans to address the barriers or system issues:

7. Lessons Learned:

8. Support needed from the State CQI Team or the OHV:

State CQI Team Discussion Agenda

Date:

Attending:

The OHV employs an attitude and set of values to improve the levels of quality in all aspects of service. The CQI Values are:

- We are all in this together
- Everyone should be treated equally
- Recognize Strengths
- Open, honest communication is vital
- Everyone has access to all the information on processes
- Focus on processes
- There are no success or failures, just learning experiences.

1. Outstanding issues from last quarter
2. Review Data Reports
3. What does the data indicate?
4. Review Local CQI Team Discussion Forms and PDSA Forms
5. Do the PDSA activities address the goal?
6. What can be done at the state level to support the Local CQI plan?
7. Create/review state goal
8. Create/review State CQI Team PDSA
9. System Barriers:
10. Required system changes:
11. What is working well
12. Lessons Learned:

UTAH DEPARTMENT OF HEALTH
Office of Home Visiting

Quarterly Report for Advisory Committee

Date

Attending:

State Data report

State Goal

Review of Local CQI Team activities

- Prevent Child Abuse Utah
- The Learning Center for Families
- Salt Lake County Health Department
- Children's Service Society

Review of State CQI Team activities

UTAH DEPARTMENT OF HEALTH
Office of Home Visiting

OHV Data Discussion Agenda

Date:

Attending:

The OHV employs an attitude and set of values to improve the levels of quality in all aspects of service. The CQI Values are:

- We are all in this together
- Everyone should be treated equally
- Recognize Strengths
- Open, honest communication is vital
- Everyone has access to all the information on processes
- Focus on processes
- There are no success or failures, just learning experiences.

1. Outstanding issues from last month
2. Review Data Reports
3. What does the data indicate?
4. Review Local CQI Team Discussion Forms and PDSA Forms
5. Do the PDSA activities address the goal?
6. What can be done by OHV to support the Local CQI plan?
7. Create/review OHV goal
8. Create/review OHV PDSA
9. System Barriers:
10. Required system changes:
11. What is working well
12. Lessons Learned:

UTAH DEPARTMENT OF HEALTH
Office of Home Visiting

OHV Feedback to Sites Form

Date:

Site:

Strengths:

Concerns:

Clarifications:

Follow up plans for TA:

Appendix C
Tool Administration Chart

Tool Administration Chart

Utah MIECHV

Tool or Question	I + Intake, IF=intake follow up, P=postpartum 8 weeks, Q= quarterly from intake 6=6 months age of baby 12=12 months age of baby, 6-I=6 months from intake 12-I=12 months from intake							
	I	IF	P	Q	6	12	6-I	12-I
Intake /Enrollment Form	X							
Insurance	X	X						X
Employment	X							X
Tobacco use	X							X
Income and Benefits	X							X
Educational Goal	X							X
DV referral		X						
Safety Plan		X						
Edinburgh (EDPS)			X					
Breastfeeding			X					
Visits to emergency room				X				
Child's injuries				X				
Routine care visit-mom					X			
Birth spacing information					X			
Well baby visit					X			
Safety information					X			
HOME					X	X		
ASQ-3					X			
ASQ-SE					X			